#### **Regional Emergency Medical Advisory Committee**

#### **Minutes**

#### **October 9, 2018**

The Regional Emergency Medical Advisory Committee (REMAC) of New York City met on Tuesday, October 9, 2018 at the Offices of the Regional EMS Council, 475 Riverside Drive, New York City. This meeting can be viewed via webcast at <a href="https://www.nycremsco.org">www.nycremsco.org</a>.

Members		Present	Absent
Burn Surgeon (1)	Robert J. Winchell, MD	√	
<b>Downstate New York A</b>	mbulance Association		
Ambulance Service Medical Director (1)	Josef Schenker, MD, Chair	√	
Emergency Medical Technicians (Basic/Paramedic) (2)	Michael Vatch, EMTP  Robert Ackerman, Alt	√	
	Vacant vacant, alt		
<b>EMS Community Emer</b>	gency Department		
	Nikolaos Alexandrou, MD		√
Medical Directors (3)	Christopher Graziano, MD		1
	Vacant		
Nurses (2)	Eric Cohen, RN		1
	Mimi Langsam, RN		<b>V</b>
Administrators (2)	Kevin Munjal, MD	√	
	Cindy Baseluos, MD	√	
FDNY EMS		I	
Commissioner or Non- Physician Designee	Vacant		
Medical Director (3)	Dario Gonzalez, MD		√
	Glenn Asaeda, MD	√	

	Bradley Kaufman, MD, 2 <sup>nd</sup> Vice Chair		<b>√</b>
Online Medical Control	Doug Isaacs, MD	√	
Physicians (2)	Nathan Reisman, MD	√	
Emergency Medical	Barbara Aziz, EMTP	√	
Technicians (Basic/Paramedic) (2)	Joshua Bucklan, RN, EMTP	√	
<b>Greater New York Hospit</b>	al Association		
President or Non- Physician Designee (1)	Alison Burke		1
Emergency Physician (1)	Jeffrey Rabrich, MD, 1st Vice Chair	√	
Ambulance Service Medical Director (1)	Vacant Neal Flomenbaum, MD, alternate		1
On Line Medical Control	Lewis Marshall, JD, MD	√	
On Line Medical Control Physicians (2)	Michael Redlener, MD Michael Hilton, MD, alternate	√	
Emergency Department	Laura Iavicoli, MD Stuart Kessler, MD, alternate	<b>√</b>	
Administrator (2)	Pamela Lai, MD	<b>V</b>	
Emergency Medical	Dominick Battinelli, EMTP		<b>√</b>
Technicians (Basic/Paramedic) (2)	Scott Chiang, EMTP	√	
<b>Medical Society of New</b>	Peter Wyer, MD	<b>√</b>	
York Physician (1)	T CICI W YCI, IVID	<b>'</b>	
<b>Medical Standards Comm</b>	ittee		
ALS Physician (1)	Paul Barbara, MD		1
BLS Physician (1)	David Ben-Eli, MD	<b>√</b>	

Department of Health & Mental Hygiene-Emergency       Celia Quinn, MD, MPH       ✓         Preparedness Program Physician (1)       Marc Kanter, MD       ✓         New York City Health & Hospitals Corporation Physician (1)       Marc Kanter, MD       ✓         New York City Police Department Physician (1)       Charles Martinez, MD       ✓         NYS Volunteer Ambulance & Rescue Association/District 4 & 18       ✓         Ambulance Service Medical Director (1)       Joseph Bove, MD       ✓         Emergency Medical Technicians (Basic/Paramedic) (2)       Martin Grillo, EMTP       ✓         Pediatric Emergency Medicine Physician (1)       Vacant       ✓         Psychiatric Emergency Medicine Physician (1)       William Fisher, MD       ✓         Regional EMS Council NYC Physician (1)       Robert Crupi, MD       ✓       ✓         Training & Education Committee Physician (1)       Jessica van Voorhees, MD       ✓       ✓         Trauma Surgeon (1)       Arthur Cooper, MD       ✓       ✓         Non-Voting Members       Yedidyah Langsam, PhD, EMTP       ✓	New York City			
Emergency Preparedness Program Physician (1)  New York City Health & Hospitals Corporation Physician (I)  New York City Police Department Physician (I)  NYS Volunteer Ambulance & Rescue Association/District 4 & 18  Ambulance Service Medical Director (I)  Emergency Medical Technicians (Basic/Paramedic) (2)  Pediatric Emergency Medicine Physician (1)  Psychiatric Emergency Medicine Physician (1)  Regional EMS Council NYC Physician (1)  Training & Education Committee Physician (1)  Trauma Surgeon (1)  Non-Voting Members  Marc Kanter, MD  Amarc Kanter, MD  Amarc Kanter, MD  Arithur Cooper, MD  Avalatemate  Value  Ware Kanter, MD  Avalatemate  Value  Value  Value	Department of Health &			
Emergency       Timothy Styles, MD, MPH, alternate         Preparedness Program Physician (1)       Marc Kanter, MD Cherisse Berry, MD, alternate         New York City Health & Hospitals Corporation Physician (1)       Marc Kanter, MD Cherisse Berry, MD, alternate         New York City Police Department Physician (1)       Charles Martinez, MD         NYS Volunteer Ambulance & Rescue Association/District 4 & 18         Ambulance Service Medical Director (1)       Martin Grillo, EMTP       √         Emergency Medical Technicians (Basic/Paramedic) (2)       Wacant       √         Pediatric Emergency Medicine Physician (1)       William Fisher, MD       √         Psychiatric Emergency Medicine Physician (1)       Robert Crupi, MD       √         Regional EMS Council NYC Physician (1)       Robert Crupi, MD       √         Training & Education Committee Physician (1)       Arthur Cooper, MD       √         Trauma Surgeon (1)       Arthur Cooper, MD       √         Non-Voting Members	Mental Hygiene-	Celia Quinn, MD, MPH	1	
Physician (1)       Marc Kanter, MD Cherisse Berry, MD, alternate       √         New York City Health & Hospitals Corporation Physician (1)       Marc Kanter, MD Cherisse Berry, MD, alternate       √         New York City Police Department Physician (1)       Charles Martinez, MD       √         NYS Volunteer Ambulance Service Medical Director (1)       Joseph Bove, MD       √         Emergency Medical Director (1)       Martin Grillo, EMTP       √         Emergency Medician (1)       Vacant       √         Pediatric Emergency Medicine Physician (1)       Vacant       √         Psychiatric Emergency Medicine Physician (1)       William Fisher, MD       √         Regional EMS Council NYC Physician (1)       Robert Crupi, MD       √       √         Training & Education Committee Physician (1)       Jessica van Voorhees, MD       √       √         Trauma Surgeon (1)       Arthur Cooper, MD       √       √         Non-Voting Members	Emergency	Timothy Styles, MD, MPH, alternate	٧	
New York City Health & Hospitals Corporation Physician (1)  New York City Police Department Physician (1)  NYS Volunteer Ambulance & Rescue Association/District 4 & 18  Ambulance Service Medical Director (1)  Emergency Medical Technicians (Basic/Paramedic) (2)  Pediatric Emergency Medicine Physician (1)  Psychiatric Emergency Medicine Physician (1)  Regional EMS Council NYC Physician (1)  Training & Education Committee Physician (1)  Trauma Surgeon (1)  Non-Voting Members  Marc Kanter, MD  Arthur Cooper, MD  Non-Voting Members	Preparedness Program			
Hospitals Corporation Physician (1)       Marc Kanter, MD Cherisse Berry, MD, alternate       √         New York City Police Department Physician (1)       Charles Martinez, MD       √         NYS Volunteer Ambulance & Rescue Association/District 4 & 18         Ambulance Service Medical Director (1)       Joseph Bove, MD       √         Emergency Medical Technicians (Basic/Paramedic) (2)       Wacant       √         Pediatric Emergency Medicine Physician (1)       Vacant       √         Psychiatric Emergency Medicine Physician (1)       William Fisher, MD       √         Regional EMS Council NYC Physician (1)       Robert Crupi, MD       √         Training & Education Committee Physician (1)       Jessica van Voorhees, MD       √         Trauma Surgeon (1)       Arthur Cooper, MD       √         Non-Voting Members	Physician (1)			
Hospitals Corporation Physician (1)  New York City Police Department Physician (1)  NYS Volunteer Ambulance & Rescue Association/District 4 & 18  Ambulance Service Medical Director (1)  Emergency Medical Martin Grillo, EMTP  Technicians (Basic/Paramedic) (2)  Pediatric Emergency Medicine Physician (1)  Psychiatric Emergency Medicine Physician (1)  Regional EMS Council NYC Physician (1)  Training & Education Committee Physician (1)  Arthur Cooper, MD  Non-Voting Members  Charles Martinez, MD  Althur Cooper, MD  Cherisse Berry, MD, alternate  ✓  William Fisher, MD  ✓  Arthur Cooper, MD  ✓  Non-Voting Members	New York City Health &	Mana Kantan MD		
Physician (1)       Charles Martinez, MD       ✓         New York City Police Department Physician (1)       Charles Martinez, MD       ✓         NYS Volunteer Ambulance & Rescue Association/District 4 & 18         Ambulance Service Medical Director (1)       Joseph Bove, MD       ✓         Emergency Medical Technicians (Basic/Paramedic) (2)       Wacant       ✓         Pediatric Emergency Medicine Physician (1)       Vacant       ✓         Psychiatric Emergency Medicine Physician (1)       William Fisher, MD       ✓         Regional EMS Council NYC Physician (1)       Robert Crupi, MD       ✓         Training & Education Committee Physician (1)       Jessica van Voorhees, MD       ✓         Trauma Surgeon (1)       Arthur Cooper, MD       ✓         Non-Voting Members	<b>Hospitals Corporation</b>		√	
Department Physician (I)       Charles Martinez, MD       √         NYS Volunteer Ambulance & Rescue Association/District 4 & 18         Ambulance Service Medical Director (I)       Joseph Bove, MD       √         Emergency Medical Technicians (Basic/Paramedic) (2)       Martin Grillo, EMTP       √         Pediatric Emergency Medicine Physician (1)       Vacant       √         Psychiatric Emergency Medicine Physician (1)       William Fisher, MD       √         Regional EMS Council NYC Physician (1)       Robert Crupi, MD       √         Training & Education Committee Physician (1)       Jessica van Voorhees, MD       √         Trauma Surgeon (1)       Arthur Cooper, MD       √         Non-Voting Members       Arthur Cooper, MD       √	Physician (1)	Cherisse Berry, MD, alternate		
NYS Volunteer Ambulance & Rescue Association/District 4 & 18  Ambulance Service Medical Director (1)  Emergency Medical Martin Grillo, EMTP   Technicians (Basic/Paramedic) (2)  Pediatric Emergency Vacant   Psychiatric Emergency Medicine Physician (1)  Regional EMS Council NYC Physician (1)  Training & Education Committee Physician (1)  Arthur Cooper, MD   Non-Voting Members  NYS Volunteer Ambulance & Rescue Association/District 4 & 18  Ambulance Service Association/District 4 & 18  William Fisher, MD    V acant   V acan	New York City Police			
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Ambulance Service Medical Director (1)  Emergency Medical Technicians (Basic/Paramedic) (2)  Pediatric Emergency Medicine Physician (1)  Psychiatric Emergency Medicine Physician (1)  Regional EMS Council NYC Physician (1)  Training & Education Committee Physician (1)  Arthur Cooper, MD  Non-Voting Members	(1)			
Medical Director (1) Joseph Bove, MD √   Emergency Medical Martin Grillo, EMTP √   Technicians (Basic/Paramedic) (2) Vacant √   Pediatric Emergency Medicine Physician (1) Vacant √   Psychiatric Emergency Medicine Physician (1) William Fisher, MD √   Regional EMS Council NYC Physician (1) Robert Crupi, MD √   Training & Education Committee Physician (1) Jessica van Voorhees, MD √   Trauma Surgeon (1) Arthur Cooper, MD √   Non-Voting Members	NYS Volunteer Ambulance & Rescue Association/District 4 & 18			
Medical Director (1) Image: Comparison of the	Ambulance Service	Joseph Roya, MD	ار	
Technicians (Basic/Paramedic) (2)  Pediatric Emergency Medicine Physician (1)  Psychiatric Emergency Medicine Physician (1)  Regional EMS Council NYC Physician (1)  Training & Education Committee Physician (1)  Arthur Cooper, MD  Vacant	Medical Director (1)	Joseph Bove, MD	٧	
(Basic/Paramedic) (2) Vacant   Pediatric Emergency Medicine Physician (1) Vacant   Psychiatric Emergency Medicine Physician (1) William Fisher, MD   Regional EMS Council NYC Physician (1) Robert Crupi, MD   Training & Education Committee Physician (1) Jessica van Voorhees, MD   Arthur Cooper, MD √   Non-Voting Members	Emergency Medical	Martin Grillo, EMTP	1	
Pediatric Emergency   Vacant	Technicians	Vacant		
Medicine Physician (1)       Psychiatric Emergency Medicine Physician (1)       William Fisher, MD       √         Regional EMS Council NYC Physician (1)       Robert Crupi, MD       √         Training & Education Committee Physician (1)       Jessica van Voorhees, MD       √         Arthur Cooper, MD       √         Non-Voting Members	(Basic/Paramedic) (2)	Vacant		
Psychiatric Emergency Medicine Physician (1)  Regional EMS Council NYC Physician (1)  Training & Education Committee Physician (1)  Arthur Cooper, MD  Non-Voting Members	<b>Pediatric Emergency</b>	Vacant		<b>1</b>
Medicine Physician (1) William Fisher, MD   Regional EMS Council NYC Physician (1) Robert Crupi, MD   Training & Education Committee Physician (1) Jessica van Voorhees, MD   Trauma Surgeon (1) Arthur Cooper, MD   Non-Voting Members	<b>Medicine Physician</b> (1)			
Medicine Physician (1) Regional EMS Council Robert Crupi, MD   NYC Physician (1) Robert Crupi, MD   Training & Education Committee Physician (1) Jessica van Voorhees, MD   Trauma Surgeon (1) Arthur Cooper, MD   Non-Voting Members	<b>Psychiatric Emergency</b>	William Fisher MD		<b>√</b>
NYC Physician (1)  Training & Education Committee Physician (1)  Arthur Cooper, MD  Non-Voting Members  Robert Crupi, MD  √  Jessica van Voorhees, MD  √  Arthur Cooper, MD  √  Non-Voting Members	<b>Medicine Physician</b> (1)	· · · · · · · · · · · · · · · · · · ·		,
NYC Physician (1)  Training & Education Committee Physician (1)  Arthur Cooper, MD  Non-Voting Members  Trauma Surgeon (1)	Regional EMS Council	Robert Crupi, MD	√	
Committee Physician (1)  Trauma Surgeon (1)  Arthur Cooper, MD  ✓  Non-Voting Members	NYC Physician (1)		'	
Committee Physician (1)  Trauma Surgeon (1)  Arthur Cooper, MD  √  Non-Voting Members	Training & Education	Jessica van Voorhees MD		
Non-Voting Members	<b>Committee Physician</b> (1)	Total tall totalloon, Itil	*	
Non-Voting Members	Trauma Surgeon (1)	Arthur Cooper, MD	<b>√</b>	
At Large Yedidyah Langsam, PhD, EMTP √	Non-Voting Members			
	At Large	Yedidyah Langsam, PhD, EMTP		<b>V</b>

At Large	Anthony Shallash, MD	√
Public	Christopher Sorrentino, RN	1

**STAFF**: Nancy Benedetto, Executive Director Administration

Marie Diglio, Executive Director Operations

Joseph Raneri, Disaster Preparedness Coordinator

**GUESTS**: Nail Cemalovic, MD

David Eng, MD, FDNY

Richard Friedman, MD, Chevra Hatzoloh

Mordy Lax, REMSCO T&E

Dr. Joseph Schenker, Chair, called the meeting to order. For the purposes of web casting, a roll call was performed. A quorum was present.

The Minutes of the September4, 2018 REMAC Meeting were unanimously approved.

Voting Requirements. A quorum is based on the number of voting seats – whether they are filled or vacant. Currently, REMAC has 30 voting seats, so when voting, a majority of members must vote in the affirmative to pass any motion. That means, 16 votes in the affirmative are needed to pass any motion.

#### **CORRESPONDENCE REPORT**

The Offices of the Council received the following correspondence:

- ➤ Membership: Yedidyah Langsam, Nick Alexandrou, William Fisher, Jason Zimmerman
- > From FDNY:
  - PCR Monthly Inventory Control Report July 2018
  - Non-compliant PCR form submission for August 2018: (June listed below)
    - Bay Community VAC REMSCO received an envelope full of rejected PCRs to prove they have been active.

- Bayside Community VAC
- Bensonhurst VAC email stating PCRs are being submitted.
- Broad Channel VFD in process ePCR
- Central Park Medical Unit
- College Point VAC
- Flushing VAC
- Glen Oaks VAC
- Glendale VAC
- Middle Village VAC
- NY Racing Association
- Ridgewood VAC

#### > From NYS DOH:

Public Notice from New York State Department of Health, Bureau of EMS,
 Operations Unit, to be read into the REMAC Minutes of the following enforcement actions:

Provider /Agency Name	EMT / Agency #	Penalty	Violation	County of Residence
Melvin Harrington	128466	\$1000 civil penalty	800.15 b	Andes

#### > Other:

Stroke PPT NYPH

#### The Office of the Council sent the following correspondence:

- ➤ The following were sent, at a minimum to Medical Standards and REMAC members:
  - Agendas, Minutes and associated attachments for the meeting.
- ➤ Letter sent to 911 Unit, FDNY, regarding incorrect identification of non-compliant PCR agencies.
- > Stroke Tag recommendations.
- ➤ Letter of support for CIH PCI center.
- Requests for credentialing information emailed to all regional EMS Agency medical directors.

#### SUBCOMMITTEE REPORTS

#### **Executive Committee**

The Executive Committee did not meet.

#### Medical Standards (David Ben-Eli, MD, Chair)

No Protocol no action items.

The following comes in the form of a seconded motion from the Medical standards Committee:

Recommend that REMAC approve sending a survey letter to NYC hospitals to identify Thrombectomy Stroke Center destinations. Criteria for participation are as follows:

- 1. 24/7 neuro-interventional capability.
- 2. agree to immediately notify OLMC if unable to provide service.
- 3. already certified as Comprehensive Stroke Center / Thrombectomy-Capable Stroke Center by NYS DOH recognized credentialing entities or intending to obtain such certification.
- 4. agree to share hospital patient data for QA/QI.
- 5. 24/7 Neurosurgery availability.
- Hospitals that fail to obtain NYS DOH recognized credentialing entities certification by end of the NYS DOH regulation transition period (i.e., end of 2 years), or fail to share mandatory QA/QI patient data, will be removed from the Thrombectomy Stroke Center destination list.
- Expected implementation date: second quarter 2019.

After discussion, REMAC conducted a roll call vote, as follows: 21 in favor, 0 opposed, 0 abstain. The motion carried.

#### REGIONAL COUNCIL UPDATE

No report. The Regional EMS Council will meet on October 23, 2018.

#### TRAINING & EDUCATION COMMITTEE UPDATE (MORDY LAX, CHAIR)

No report. The Training and Education Committee of the Regional EMS Council of New York City will meet on October 29, 2018.

#### JOINT REMSCO/REMAC QA COMMITTEE UPDATE (MICHAEL REDLENER, MD, CHAIR)

No report. The Joint Regional Emergency Medical Services Council/Regional Emergency Medical Advisory Committee (REMAC) Quality Improvement Committee will meet on October 18, 2018.

#### STATE EMS COUNCIL/SEMAC UPDATE (Yedidyah Langsam, PhD)

The State EMS Council (SEMSCO) and State Emergency Medical Advisory Committee (SEMAC) met on September 25 & 26, 2018. The following is a meeting summary:

- 1) Nominations for officers are being accepted and will be voted on in January 2019.
- 2) Minutes of the May Meeting were approved. Transcript corrections.
- 3) SEMSCO Bylaws are being revised (Dr. Langsam is on this committee).
- 4) Vital Signs conference was discussed.
- 5) SEMSCO meets 3 time each year, but subcommittees can meet six times per year (an additional 3 times remotely). This will be implemented for SEMSCO and SEMAC.
- 6) The 2014-15 Trauma data report will be released in October.
- 7) Opioid report will be released by the end of the year and should be reviewed.
- 8) Grants:
  - a) Education for EMS for opioid patients (substance abuse and mental health)
  - b) Leadership development
  - c) EMSC for Pediatric Emergency Care Coordinator (PECC)
  - d) EMS Standards of Excellence (based on Virginia process)
- 9) NYS DOH will create a newsletter to keep regions updated.
- 10) January is the start date for the EMTCC bridge to medic.
- 11) CME recert program is being revised and will be roll-out at the end of the year.
- 12) Changes to NYS DOH staff Mike Taylor, Tom Behanna have left.
- 13) Motions:
  - a) NYC ALS protocols approved
  - b) NYPD ESU ALS Tactical protocols approved

- c) Transmucosal fentanyl administration is up to individual REMACs. fentanyl is already on formulary. The alternate route was approved
- d) REMAC resolution for transporting patients with blood transfusions: This ATS regulation is a threat to public health.
  - i) Motion: As written, the ATS Regulations impede clinically appropriate emergency medical care. We implore the commissioner that there should be a moratorium on any personnel or hospital ems agency enforcement pending the establishment of a committee made up of the department, blood and tissue committee members, semac members and hospital representatives, to review the implementation of the ATS regulations. During this time existing patients may be transported with appropriate personnel.

#### e) Budget:

- i) Motion: The SEMSCO recommends a BEMS budget of \$6 million for State Operations in SFY 2019-2020, similar to last year. The SEMSCO recommends that the cash ceiling be set at the budget appropriation amount to allow the full amount for State Operations budget to be spend during the fiscal year.
- ii) Motion: The SEMSCO recommends a BEMS budget of \$14.5 million for aid to localities in SFY 2019-2020, similar to last year. The SEMSCO recommends that the cash ceiling be set at the budget appropriation amount to allow the full amount of the aid to localities EMS budget to be spend during the fiscal year.

The next SEMAC/SEMSCO meetings will be held on January 15 & 16, 2018.

#### **UNFINISHED BUSINESS**

The Bylaws Committee has been meeting, but its report is not yet completed.

Dr. Glenn Asaeda, FDNY, spoke about OD Leave Behind Kits. The project has begun and appears successful. There are approximately 10-15 OD type calls per day. Approximately 2 kits each day are distributed. 20% of patients refuse kits. Kits are free. REMSCO also distributes free kits.

#### **NEW BUSINESS**

NYPH Mobile Stroke Unit: Dr. Michael Lerario gave a presentation of the current status of the mobile stroke unit project. He also gave a presentation on a proposed QA project involving new equipment for Cerebral Oximetry (Attached). The device to be used is FDA approved, and there would be no changes in current MSU protocols/treatments. This technology improves detection of LVO stroke. REMAC voted unanimously to support this project.

No further discussion, the meeting adjourned at 8:00 pm. The next meeting of the REMAC is scheduled for November 13, 2018.

# IMPROVING FIELD LVO PREDICTION IN NEW YORK CITY

October 9, 2018 Meeting of REMAC

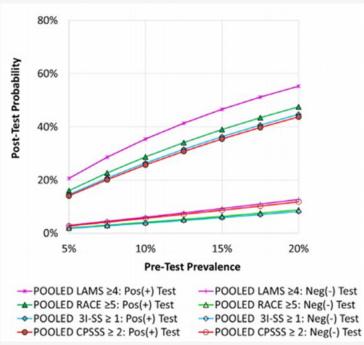




### TRIAGE

### TRANSPORT

### **TREAT**







Primary Stroke Center

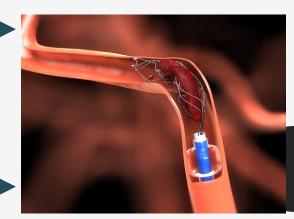






Thrombectomy Capable Center

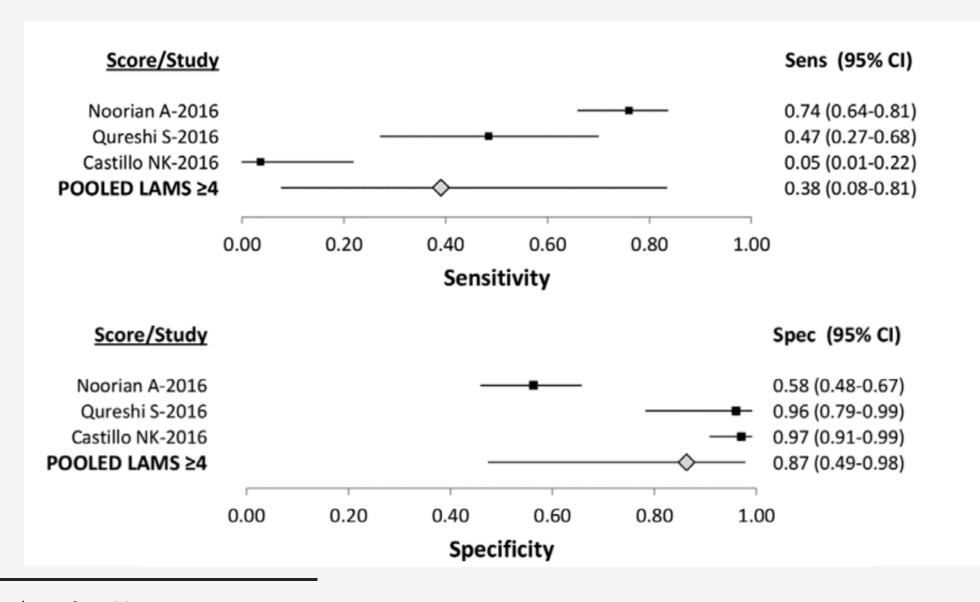




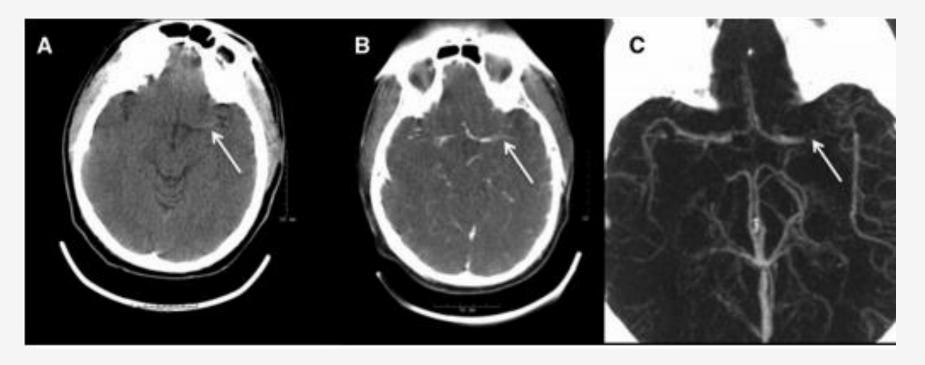
# Emerging Data for Hospital Bypass if LVO+

- Simulation of abstract geographical environment using RACE ≥ 5
  - Mean time to groin puncture reduced by 30 minutes without change in IV thrombolysis time
  - Unchanged mean ambulance use time; reduced secondary transfers by 61%
- Retrospective state-wide (Rhode Island) study of treatment effect pre- and post-implementation of field triage using LAMS
  - Large improvements were seen in first hospital arrival to recanalization times (156 vs 109 minutes)
  - Increase in number of patients discharged home and decrease in mortality

## Limitations in Field LVO Prediction Scores



# Prehospital CT Angiography

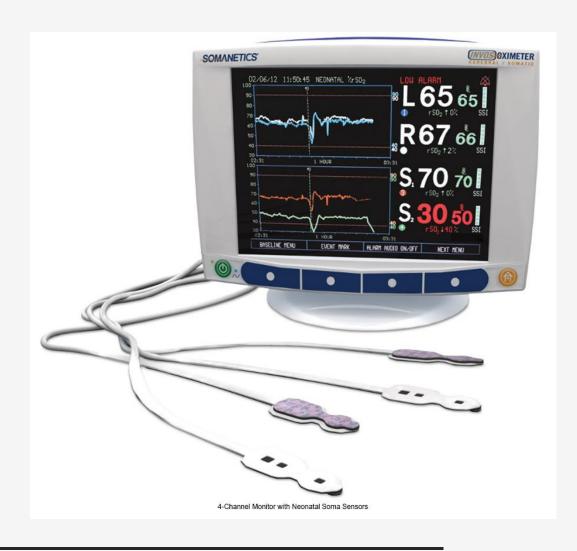


Cleveland Clinic (above): John S. et al; J Neuroimaging 2016; 26: 391-394

Homburg Germany: Kettner M et al. Cerebrovascular Dis 2017; 44: 338-343

- CTA can be performed on MSTU to aid in diagnosis and triage of LVO
- Limited applicability to standard ambulances

## Cerebral Oximetry Using Near-Infrared Spectroscopy (NIRS)

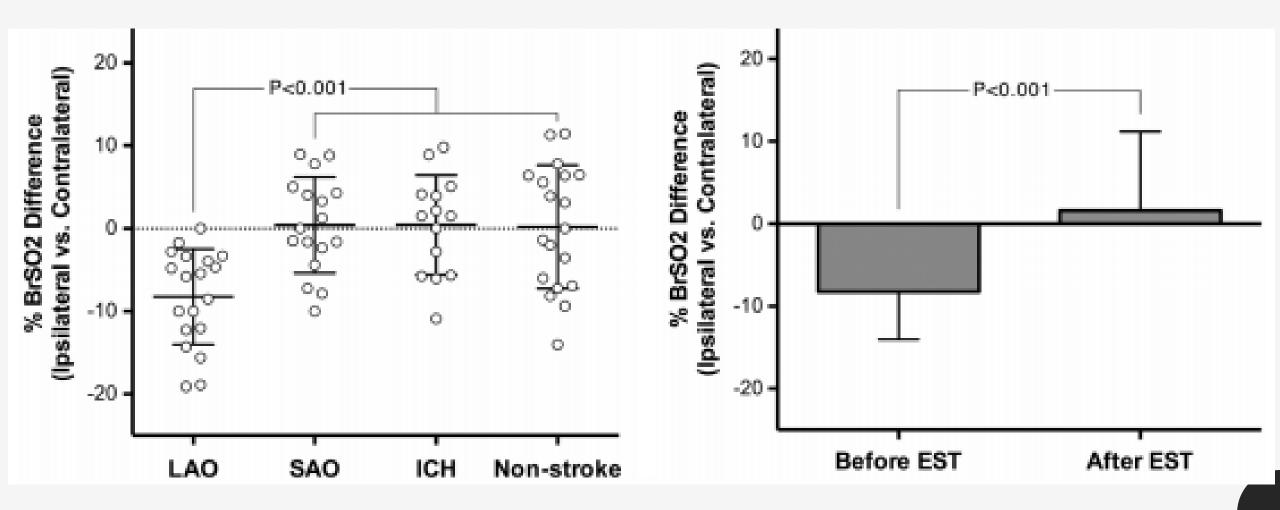




# Clinical Advantages of NIRS for Cerebral Oximetry

- FDA approved for use in measuring regional cerebral oxygen saturation
- Routinely used nationwide for clinical practice (including NYP)
- Diverse functions in ICU, OR, Pediatrics, Stroke Units, ED
- Noninvasive (similar risk to pulse oximetry application)
- Easy and rapid to teach, perform, and interpret
- Validated to detect LVO in acute stroke setting
- Can be incorporated into routine clinical practice on MSTUs

# Detection of LVO in Acute Stroke Setting



# Predictive Ability of NIRS for LVO

- Discrimination of LVO at a -3% ΔBrSO<sub>2</sub> threshold:
- Sensitivity: 84%
- Specificity: 70%
- Addition of G-FAST (Gaze-Face-Arm-Speech) Clinical Score:
- Sensitivity: 84%
- Specificity: 90%

# Proposal for Use of NIRS on MSTU

- QA project to evaluate a non-invasive, FDA-approved, potentially useful diagnostic modality for stroke patients.
- Plan for 5 years of study starting January 1, 2019 (n= 100 LVO patients)
- To be equipped on all NYP MSTUs
- Measured outcomes: diagnostic accuracy for LVO, projected hospital bypass volume, time to groin puncture, adverse events
- Will obtain IRB approval at all participating NYP hospitals
- Will not interrupt standard MSTU workflow processes; will not be used for clinical practice during QA project.

# Summary

- More reliable, accessible, noninvasive methods are needed for prehospital triaging of LVO patients.
- Clinical scores have limited sensitivity and CTA can only be applied in limited clinical settings.
- Cerebral Oximetry using NIRS is FDA approved, routinely used in clinical practice, and easy to teach, perform, and interpret.
- Adding NIRS measurements to clinical scores in acute stroke increases the ability to predict LVO.
- Cerebral oximeters can be incorporated into routine clinical practice on MSTUs.